

Comet IV. 1889 . . . (Davidson's, July 19, 1889.)

Date. 1889.	Greenwich Mean Time.	Comet—Star.			No. of Comps.	Comet's App. R.A.			Log. (p × Δ)	Comet's App. Dec.			Log. (p × Δ)	Red. to App. Place.	Comp. Star.
		Δ α	Δ δ	''		h	m	s		°	'	''			
Aug. 29	9 10 1	+0 28'58	— 1 53'4	— 1 53'4	8-8	16	11	47'06	9'5103	+24 31 30'6	—	—	0'6978	+0'80	9
	9 54 41	—1 23'48	+ 5 26'1	+ 5 26'1	7-7	16	14	11'55	9'5630	+24 57 49'2	—	—	0'7278	+0'80	10
Sept. 1	9 47 48	+1 18'93	— 2 0'8	— 2 0'8	8-8	16	18	44'04	9'5628	+25 45 8'2	—	—	0'7194	+0'76	11
	9 50 32	—2 28'50	+ 2 45'0	+ 2 45'0	1-1	16	29	30'49	9'5788	+27 26 27'4	—	—	0'7165	+0'73	12
8	9 59 12	+2 21'09	— 5 28'9	— 5 28'9	6-6	16	33	38'72	9'5901	+28 0 40'6	—	—	0'7229	+0'68	13
	8 7 1	+2 58'28	— 6 7'6	— 6 7'6	8-8	16	49	17'90	9'4844	+29 53 53'9	—	—	0'6181	+0'57	14
17	8 50 58	+1 21'84	+ 5 9'7	+ 5 9'7	8-8	16	51	17'04	9'5529	+30 6 28'5	—	—	0'6591	+0'57	15
	8 19 2	—1 21'10	+ 0 7'8	+ 0 7'8	8-8	16	53	9'59	9'5131	+30 17 34'6	—	—	0'6281	+0'57	16
22	9 12 26	—1 49'83	— 9 30'2	— 9 30'2	8-8	17	0	49'74	9'5889	+31 1 1'9	—	—	0'6820	+0'51	17
	7 52 12	+2 36'03	+ 8 22'6	+ 8 22'6	8-8	17	6	23'44	9'4978	+31 29 42'5	—	—	0'6014	+0'45	18
30	8 33 11	—2 2'61	+ 7 43'5	+ 7 43'5	9-9	17	15	53'19	9'5726	+32 13 33'1	—	—	0'6465	+0'41	19
	8 32 43	—0 57'86	+ 0 27'5	+ 0 27'5	9-9	17	21	34'42	9'5804	+32 37 15'8	—	—	0'6488	+0'36	20
Oct. 3	7 17 17	—3 29'83	— 5 55'3	— 5 55'3	8-8	17	38	36'62	9'5080	+33 41 25'1	—	—	0'5717	+0'26	21
	6 50 49	+3 4'12	— 5 19'0	— 5 19'0	7-7	17	42	25'72	9'4662	+33 54 41'5	—	—	0'5433	+0'20	22
18	7 48 56	+1 59'49	+ 6 54'0	+ 6 54'0	7-7	17	50	15'52	9'5743	+34 21 1'7	—	—	0'6146	+0'16	23
	7 42 5	+1 30'78	— 0 6'7	— 0 6'7	8-8	17	52	12'76	9'5691	+34 27 12'7	—	—	0'6076	+0'15	24
21	10 17 9	—3 42'18	+ 9 10'4	+ 9 10'4	6-6	17	56	20'89	9'6426	+34 40 29'5	—	—	0'7845	+0'16	25
	7 20 33	+3 19'73	+ 0 28'9	+ 0 28'9	7-7	18	2	2'42	9'5567	+34 58 26'7	—	—	0'5868	+0'08	26
Nov. 12	7 29 12	+1 47'20	+ 6 35'6	+ 6 35'6	3-3	18	40	45'42	9'6173	+36 57 44'8	—	—	0'6216	—0'08	27
	7 33 43	—0 54'52	— 3 14'6	— 3 14'6	6-6	18	42	53'00	9'6231	+37 4 14'3	—	—	0'6290	—0'08	28

Remarks.

September 6.—Comet faint in bright moonlight; interrupted by clouds.

September 8.—Observation not quite satisfactory. Comet too faint in the moonlight.

September 30; October 12.—The R.A. comparisons of this comet are generally difficult to make owing to the elongated form of the nucleus in the direction of the parallel of declination. The individual results, therefore, do not run quite smoothly. The declinations are better.

October 3.—Comet faint in moonlight.

November 12.—Comet faint, invisible after moonrise.

November 13.—Comet faint, observation very doubtful.

October 18.—Comet faint, sky hazy.

Comet V. 1889 . . . (Brooks's, July 6, 1889.)

Date.	Greenwich Mean Time.		Comet—Star.		No. of Comps.	Comet's App. R.A.			Log. (p × Δ).	Comet's App. Dec.		Log. (p × Δ).	Red. to App. Place.	Comp. Star.
	h	m	s	Δ.		h	m	s		'	"			
1889.														
Aug. 29	11	3	12	+ 1 27' 91"	6-6	0	6	8' 07"	- 9' 3341	5 54	43' 6"	0' 8670	+ 2' 19	+ 15' 1
Sept. 1	10	50	3	- 2 33' 71"	7-7	0	5	0' 40"	- 9' 3348	5 51	7' 0"	0' 8666	+ 2' 22	+ 15' 3
16	9	2	46	+ 1 30' 55"	8-7	23	56	51' 81"	- 9' 4220	5 32	34' 0"	0' 8618	+ 2' 40	+ 15' 8
17	9	43	27	+ 0 50' 98"	8-8	23	56	12' 25"	- 9' 3209	5 31	6' 6"	0' 8658	+ 2' 41	+ 15' 8
18	9	6	32	+ 0 13' 05"	8-8	23	55	34' 32"	- 9' 3972	5 29	29' 3"	0' 8629	+ 2' 42	+ 15' 8
20	11	59	48	- 1 10' 11"	8-8	23	54	11' 18"	8' 2361	5 26	3' 4"	0' 8709	+ 2' 43	+ 15' 8
22	10	12	57	- 2 25' 42"	7-7	23	52	55' 88"	- 9' 1327	5 22	41' 2"	0' 8686	+ 2' 44	+ 15' 8
23	10	39	28	+ 2 47' 53"	2-2	23	52	16' 31"	- 8' 9466	5 21	2' 7"	0' 8696	+ 2' 45	+ 15' 8
25	8	47	51	+ 1 33' 15"	8-8	23	51	1' 94"	- 9' 3680	5 16	53' 8"	0' 8633	+ 2' 45	+ 15' 8
30	9	37	38	+ 2 22' 06"	8-8	23	47	57' 12"	- 9' 1271	5 5	2' 6"	0' 8672	+ 2' 46	+ 15' 8
Oct. 1	11	17	15	+ 1 44' 99"	8-8	23	47	20' 06"	8' 4661	5 1	54' 1"	0' 8688	+ 2' 47	+ 15' 8
3	12	15	41	- 0 49' 49"	8-8	23	46	12' 75"	9' 1262	4 56	2' 0"	0' 8665	+ 2' 47	+ 15' 7
14	7	49	59	- 1 24' 71"	8-8	23	41	41' 83"	- 9' 3000	4 14	48' 0"	0' 8611	+ 2' 44	+ 15' 5
17	10	18	43	+ 3 0' 63"	5-5	23	40	56' 68"	8' 6644	4 0	4' 9"	0' 8635	+ 2' 42	+ 15' 4
19	8	55	57	+ 1 43' 68"	9-9	23	40	36' 77"	- 8' 8579	3 50	15' 5"	0' 8625	+ 2' 41	+ 15' 4
21	11	8	40	+ 1 29' 10"	8-8	23	40	22' 18"	9' 1694	3 38	46' 8"	0' 8602	+ 2' 40	+ 15' 3
24	10	19	53	- 2 1' 08"	8-8	23	40	15' 49"	8' 9644	3 21	51' 3"	0' 8599	+ 2' 39	+ 15' 3
27	10	10	19	+ 1 38' 47"	9-9	23	40	25' 46"	8' 9791	3 3	19' 5"	0' 8582	+ 2' 36	+ 15' 2
30	10	1	36	+ 1 8' 24"	4-4	23	40	51' 55"	8' 9970	2 43	56' 6"	0' 8564	+ 2' 34	+ 15' 1

Remarks.

September 25.—Comet not quite so well seen as previously ; the reason of this is not apparent. Sky clear.
October 19.—Two small stars near the comet made the bisections difficult and uncertain. October 30.—Windy, clock difficult to hear.